

Automotive Lighting Trend & MOBIS Movement for the Future

The background of the slide is a dark, atmospheric scene. It features a glowing red horizon line that curves across the middle of the frame. Above this line, a city skyline is visible, with buildings illuminated in red and white. The overall color palette is dominated by dark reds and blacks, creating a futuristic and high-tech aesthetic.

Aug. 30th 2023
Taewon Lee
Hyundai MOBIS

Contents



MOBIS at a Glance



Design Trend



MOBIS Technologies



GLOBAL #6 TIER1 SUPPLIER

GLOBAL RANKING 2022

- | | |
|----------|---------------------------------------|
| 3 | ZF Friedrichshafen
42.1B USD |
| 4 | Magna International Inc.
37.8B USD |
| 5 | CATL
33.5B USD |
| 6 | Hyundai
MOBIS |
| 7 | Aisin Corp.
31.2B USD |
| 8 | Forvia
26.8B USD |
| 9 | Continental
25.4B USD |

OUR GROWTH PATH



MOBIS GLOBAL NETWORK

44 Plants total
worldwide

7 EV Plants
EV mobility

5 Sales Offices
KR US EU CN JP

10 R&D Center
KR US EU CN IN



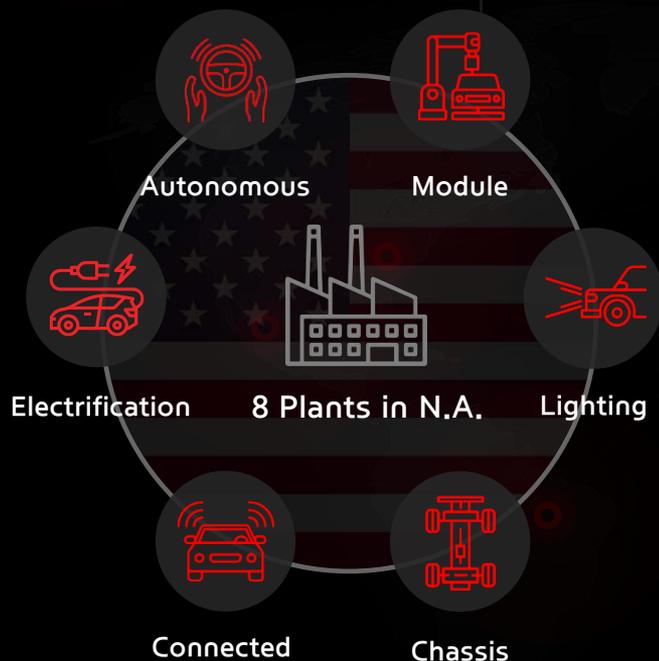
MOBIS NEW STEP FORWARD IN N.A.

44 Plants total
worldwide

7 EV Plants
EV mobility

5 Sales Offices
KR US EU CN JP

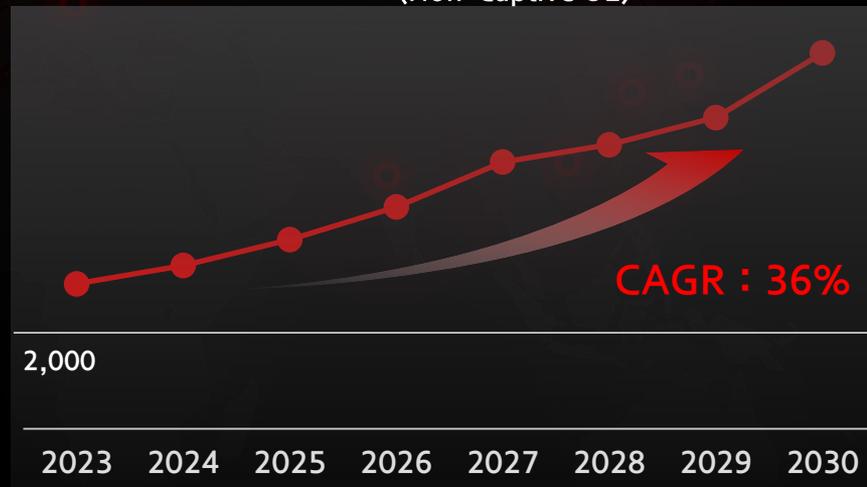
10 R&D Center
KR US EU CN IN



Sales Target in North America

(Mil\$)

(Non-Captive OE)



Contents



MOBIS at a Glance



Design Trend



MOBIS Technologies



08 Eye-catching Eye

01 Cabin on Battery

07 Finale on ICE

02 Aero & Eco

06 Peacock Feather

03 Seamless Emphasis

05 Planned Obsolescence

04 Next Fascia

8

CAR EXTERIOR
DESIGN TREND

2023

01 Cabin on Battery

Extended wheelbase, Glass roof



Lotus Eletre



Audi Skysphere Concept



Tesla Model Y

Changes in exterior design due to **the positive acceptance of EV**

01 Cabin on Battery Changes in Profile



Mercedes-Benz EQS

Changes in exterior design due to **the positive acceptance of EV**

02 Aero & Eco

Aero-dynamic Elements



Aerodynamic design for improved fuel economy and extended range

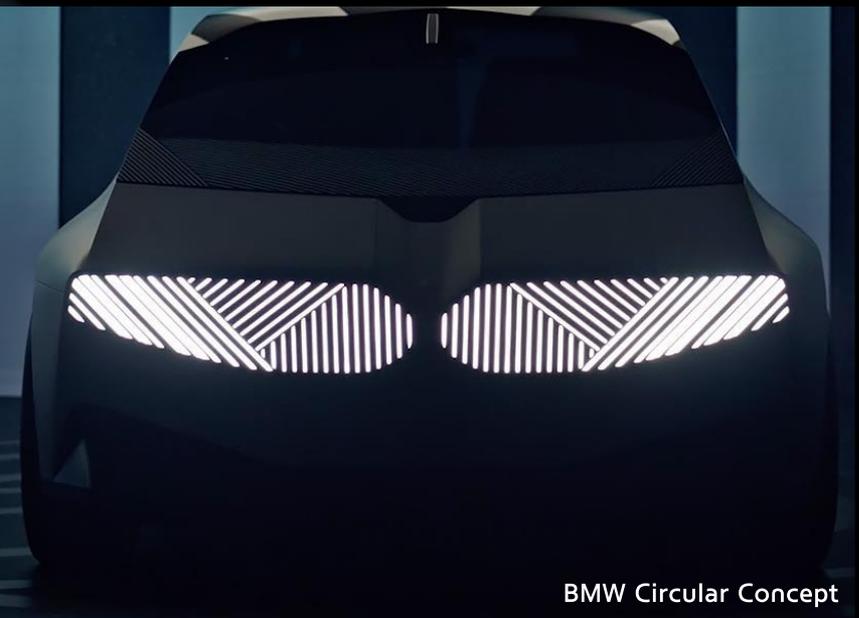
02 Aero & Eco

Eco-Friendly Material



Eco-friendly design in exterior design

03 Seamless Emphasis



A design that responds to the **pure** image of an electric car and a **sleek** aerodynamic body

04 Next Fascia



An attempt to **add new value** to the missing grille, such as various sensors and lighting communication elements

04 Next Facia

Communication light



An attempt to **add new value** to the missing grille, such as various sensors and lighting communication elements

05 Planned Obsolescence



Designed in the opposite direction to past trends
to increase visual freshness and **realize differentiated value**

06 Peacock Feather



Showcasing strong visual characteristics with **colorful** and **ostentatious** design

07 Finale on ICE

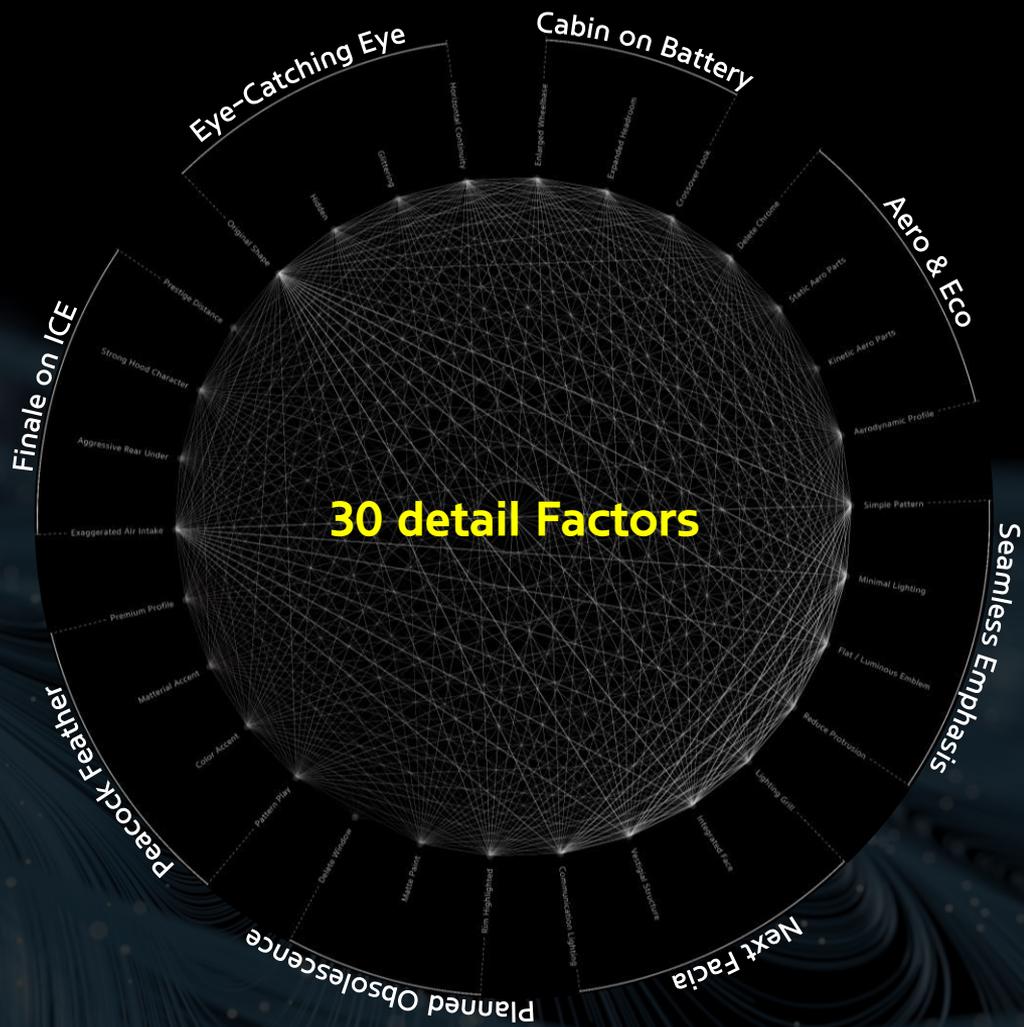


Emphasizing the design of the internal combustion engine, which has become rare, as a competitive advantage

08 Eye-Catching Eye



An attempt to fill the lowered visual density of the exterior of an electric vehicle with a more **emphasized lighting image**



Data Resource List

2021 ~ 2023, EV / MOBILITY, PRODUCTION / CONCEPT, 145 CARS

EUROPE (43 models)

Audi

Activesphere Concept
e-tron GT
Urbansphere
Concept
Q4 e-tron
A8
A6 e-tron Avant
Concept
Skysphere Concept
Grandsphere
Concept
A6 e-tron Concept
AI:ME

BMW

I Vision Dee Concept
BMW i7
BMW X4
BMW XM
BMW M2
BMW iX
BMW i4
Vision Circular
Concept

Bentley

Muliner Batur
Muliner Bacalar
EXP 100 GT Concept

Citroen

Oli Cocnept
Ami
C4

Cupra

Tavascan
DarkRebel Concept
UrbanRebel Concept

Lamborghini

Revuelto

Lancia

Pu+Ra HPE Concept

Land Rover

Range Rover Velar
Range Rover

Lotus

Eletre

Mercedes-Benz

GLS 600 Maybach
EQS SUV Maybach
E-Class
SL 63 AMG
Vision EQXX Concept
Vision AMG Concept
EQS
EQB
EOA
Maybach EQS SUV Concept
EQT Concept
EQG Concept
Vision AVTR

MG

Cyberster Electric Roadster

Mini

Aceman Concept
Vision Urbanaut Concept

Peugeot

Inception Concept
508
408

Polestar

Polestar 4
Polestar 3

Porsche

Cayenne
Vision 357 Concept
Taycan

Pininfarina

Foxtron Model B
Concept

Renault

Clio
Espace
Scenic Vision Concept
5 Concept
Morphoz Concept
Megane eVision Concept

Skoda

Vision 7S Concept

Smart

Concept.No.1

Volkswagen

ID.7
ID.3
ID Buzz
ID.2all Concept

Volvo

EX90
Recharge Concept

Fisker

Ocean

ASIA (39 models)

Acura

Precision EV Concept
Integra Concept

Hyundai

Sonata
Kona
Ioniq 7
Palisade
Ioniq 6
Grandeur
Staria
Santa Cruz
N Vision 74
Ioniq 5

Honda

HR-V
Civic Type R
e:N2 Concept
E Concept

Infiniti

QX60 Monograph Concept
Qs Inspiration Concept
QX Inspiration Concept

Kia

EV9
Xceed
Telluride
Soul
Niro
EV5 Concept
Carens
Sportage
EV6

Lexus

LM
RZ 450e
LF-30 Concept
2022NX
LF-Z Electrified Concept

Mazda

CX-50

Mahindra

XUV.e9 Concept
BE 09 Concept
BE 05 Concept

Mitsubishi

XRT Concept
XFC Concept

Nissan

GT-R
Z
Pathfinder Concept
Arizon Concept
Max-Out EV Concept

Ssangyong

O100 Concept
F100 Concept
KR10 Concept
Torres EVX Concept

Subaru

Impreza

Sony

Afeela Concept

Suzuki

Evx Concept

Genesis

G90
X Speedium Coupe
X Speedium Convertible
GV60

CHINA (36 models)

BAIC

Beijing X55

BYD

Ocean-X Concept
Seal

Changan

CD701
Vision-V

GAC

Emkoo Crossover
Trumpchi Concept
Time Concept
Enpulse Concept

Geely

Galaxy Light Concept
Vision Starburst

Haval

Vision 2025

Hiphi

Hiphi Z
Hiphi X
Hiphi 1

Hongqi

E-HS9
E-JING GT Concept

JAC

SEi6 Pro

Jidu

Robo-01
Robo-02

Li

Li L9

Lynk CO

Lynk 08
Next Day Concept

NIO

ET7
EVE Concept
ET Preview Concept

Qoros

Milestone Concept

Roewe

Whale Concept
R-Aura Concept
Vision-i

SAIC

IM L
R-ES33 Concept
Kun Concept

Yangwang

Yangwang U8
Yangwang U9

Zeekr

2023 X

AMERICA (27 models)

Jeep

Avenger

Lincoln

Star Concept
L100 Concept
Anniversary Concept

Lucid

Lucid Air

Ram

1500 REV

Rivian

R1T

Tesla

Model Y
Model S
Cybertruck Concept

Buick

Envista
Wildcar EV Concept
Electr-X Concept
GL8 Flagship Concept

Cadillac

Celestiq
Lyriq
InnerSpace Concept

Chevrolet

Trax
Equinox EV
Bolt EV

Chrysler

Airflow Graphite Concept

Dodge

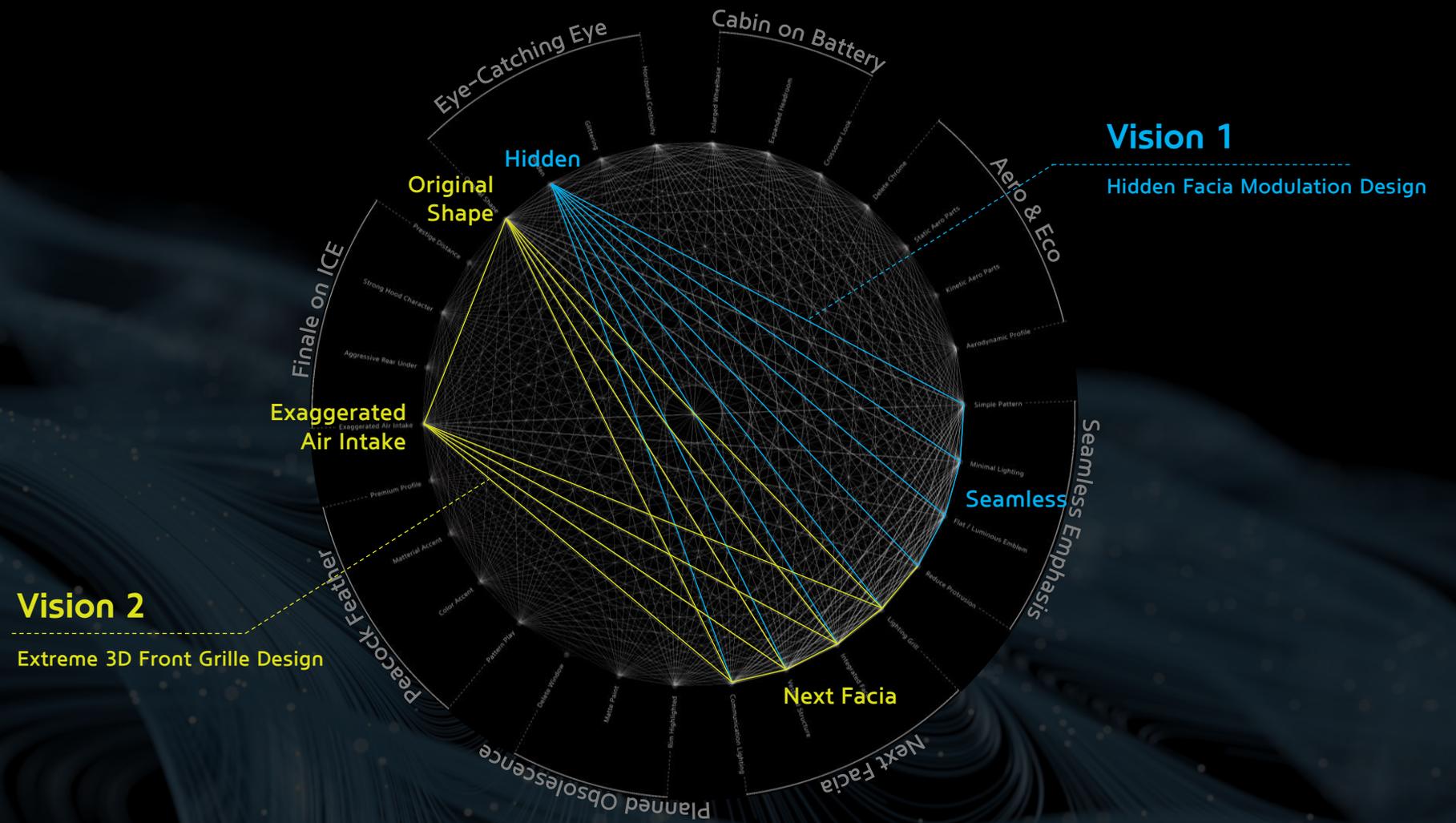
Charger Daytona SRT

Ford

Mustang GT
F-150 Lightning
Bronco

GMC

Sierra EV
Hummer EV SUV



Vision 1

Hidden Facia Modulation Design

Vision 2

Extreme 3D Front Grille Design

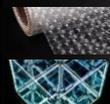
Vision 1

Hidden Facia Modulation Design

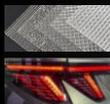


Vision 2

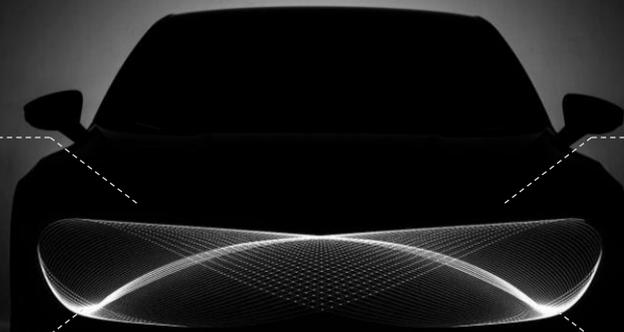
Extreme 3D Front Grille Design



3D Lens
+ Half Mirror



3D Pattern Lens
+ Multi Color Lens



Hologram Film
+ Insert Film



Laser Etching
+ 3D Lens

Contents



MOBIS at a Glance



Design Trend



MOBIS Technologies



Main beam with **LOW PROFILE**



Opening height
(mm)

17

12

15

12

Uniform lit image

-

possible

possible

possible

Function

Low & High Beam

Low & High Beam

Low & High Beam

Low & High Beam
with DRL

Communication for FAR FIELD

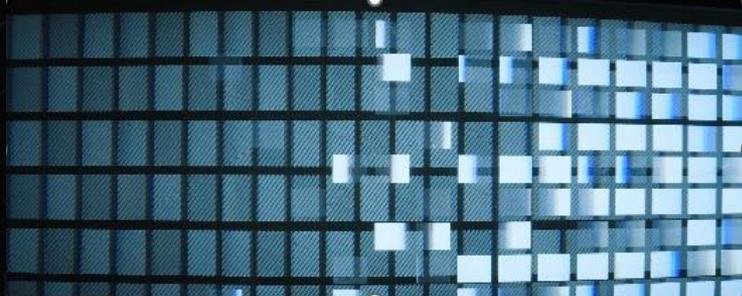
			Image
Number of pixel	1.3M	25.6K	
FOV	H: $\pm 7^\circ$ V: $-4^\circ \sim +3^\circ$	H: $\pm 12^\circ$ V: $-4^\circ \sim +2^\circ$	
Resolution	0.01°	0.1°	
			

Communication for **NEAR FIELD**

			
Optic type	Reflector	Imaging optic	MLA (Micro Lens Array)
Function	Backup guide	Backup guide, Turn, Welcome	Backup guide, Turn, Welcome, Individual control
Contrast	26:1	300:1	300:1
Image			

Lenticular **GRILLE LIGHTING**

Pixel design



Stardust design



Design
differentiate



Premium grille
solution



Communication
function



Customizable 3D
patterns

Kinetic Motion Lighting



MOBIS

Kinetic Motion Lighting

<https://youtu.be/JTfXAPIV8Xw?feature=shared>



MOBIS

THE ONE
FOR
ALL MOBILITY